

# OZ Optics Limited

## Corporate Overview

### OZ Optics Limited

May 2016

# Agenda

- Company Profile
- OZ Optics Canada
- OZ Optics Turkey
- OZ Optics China
- Manufacturing Strategy
- Industry Standards
- Core Competencies
- Quality Policy
- Competitive Advantage

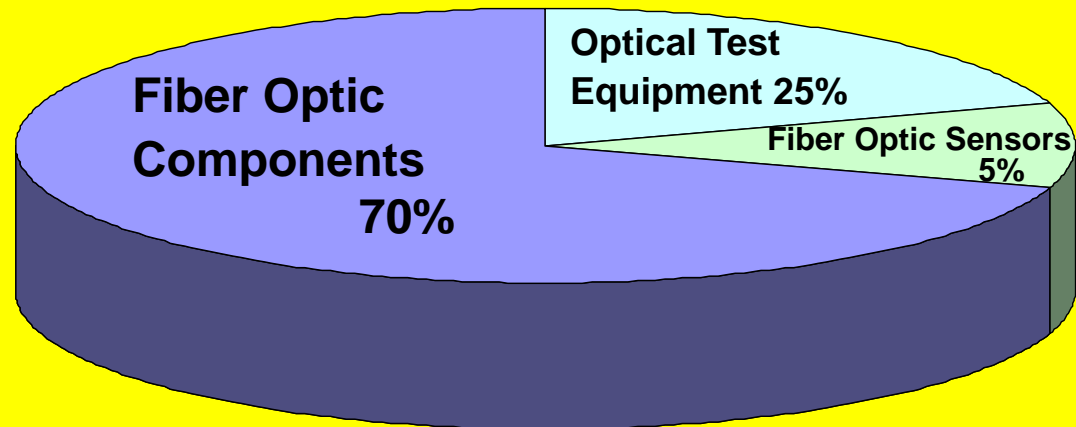
# Company Profile

- Company founded in 1985;
- Corporate headquarters located in Ottawa, Canada;
- Manufacturing facility in Ottawa/Canada, Izmir/Turkey, and Jiaxing/China
- Seven Product Groups: **Laser-to-Fiber Delivery Systems, High Power Fiber Optic Components, Polarization Maintaining Products, Attenuators, Opto-Electronic Packaging, Test Equipment, Fiber Optic Sensor Systems**
- Sales offices in Canada, USA, Turkey and China



# Company Profile

## ➤ Three Product Groups:



- Over 1,000 products
- Leading Edge R&D

# OZ Optics Products



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## Polarization Maintaining Fiber Optic Components

Patent Numbers: USA 7058275, 7095931, 7295731, China 1672073



**Polarization Maintaining Connectors / Patchcords**

**Polarization Maintaining and Polarizing Splitters / Combiners / Fused Couplers / Switches**

**All Fiber Manual and Electrically Driven Polarization Controllers / Scramblers**

**PM Fiber Directional Taps / Power Monitors**

**Manual / Electrically Controlled PM Fiber Pigtailed Variable Attenuators**

**PLC Splitters**

**Fiber Pigtailed Polarizers**

**PM Fiber Pigtailed Circulators**

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## High Power Fiber Optic Components

Patent Numbers: Canada 2494133, USA 7058275, 7095931, 7295731, China 1672073



**High Power/Temperature Connectors & Patchcords**

**High Power Isolators**

**High Power Laser to Fiber Couplers / Collimators / Focusers**

**High Power Mode Field Adapters**

**High Power Optical Taps / Power Monitors**

**CO<sub>2</sub> Cleaning for High Power Components**

**High Power Splitters / WDM's**

**Shutters / Receptacles / Sleeve Thru Adapters with Sensors**

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### Fiber Optic Attenuators for SM, PM, and MM Fibers

<p><b>Digital Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.01dB Resolution, Fast Response</li> <li>• 0.001 to 100dB Attenuation Range</li> <li>• 100mW Max</li> </ul>	<p><b>Electrically Controlled Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.01dB to 100dB Attenuation Range</li> <li>• Up to 2 Watts Power Handling</li> <li>• PC Based, Analog and Digital Control</li> </ul>	<p><b>MEMS Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.01dB to 40dB Attenuation Range</li> <li>• Small Size, Low Cost, Low Power Consumption</li> <li>• Low Wavelength Resonance, Low Crosstalk</li> </ul>
<p><b>SM / PM / MM Fiber Pigtailed Inline Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.01dB to 100dB Attenuation Range</li> <li>• 500mW Power, 200mW Maximum Response</li> <li>• 0.01dB PCC, 0.01dB Tolerance Specifications</li> </ul>	<p><b>Single/Multi Channel Miniature Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• Compact, Less Than 5mm Spacing Between Fibers</li> <li>• Designed for Multiple Fiber Arrays</li> <li>• PC Based Monitors</li> </ul>	<p><b>Reflective Style Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.01dB to 60dB Attenuation Range</li> <li>• 0.1dB Resolution</li> <li>• 40W, 400W, 400W Backreflection</li> </ul>
<p><b>Air Gap Variable Attenuators</b></p>  <ul style="list-style-type: none"> <li>• 0.1dB Resolution</li> <li>• Fast Power Response</li> <li>• Fiber, PC and 25mm Connector</li> </ul>	<p><b>Plug Type Fixed Attenuators</b></p>  <ul style="list-style-type: none"> <li>• Low Insertion Loss</li> <li>• High Reliability</li> <li>• Available for Multiple Fiber Arrays</li> <li>• Available for Fiber to Fiber Arrays</li> </ul>	<p><b>Attenuating Fiber Patchcords</b></p>  <ul style="list-style-type: none"> <li>• Available for Fiber to Fiber Arrays</li> <li>• Available for Fiber to PC Arrays</li> <li>• Available for Fiber to 25mm Connector Arrays</li> <li>• After 30 days and 1000 hours aging</li> </ul>



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### Laser & Laser Diode to Fiber Delivery Systems

<p><b>Laser to Fiber Couplers</b></p> 	<p><b>Bare Fiber Adaptors with Magnetic Clips</b></p> 	<p><b>Bulkhead Receptacles</b></p> 
<p><b>Pigtail/Receptacle Style High/Low Power Collimators/Focusers</b></p> 	<p><b>High/Low Power Patchcords</b></p> 	<p><b>WDM/RGB Combiners</b></p> 
<p><b>OCT Modules and 2 micron Components</b></p> 	<p><b>OEM Laser Diode to Fiber Couplers</b></p> 	<p><b>Turnkey, Ultra Stable Laser Modules</b></p> 



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# OZ Optics Products



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### Fiber Optic Components for Optoelectronic Packaging


Hermetically Sealable Patchcords with Glass or Metal Solder



Single Channel



Multi Channel



Metalized Fibers




PM/SM/MM Fiber Pigtailed V-Groove Arrays




Polarization Measurement System for V-Grooves




Tapered / Lensed Fiber Polished / Laser Shaped




Glass Solder Preforms



Fiber Optic Ferrules




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### Fiber Optic Test Equipment



Polarization Extinction Ratio Measurement Systems



Power Meters with Smart Detector Heads



Broadband Digital Variable Attenuators



Optical Fiber Length Meters



High Power Visual Fault Locators Fiber Optic Stable Sources



Inline Optical Power Monitors/Meters



Laser Diode Sources Single/Multiwavelength



Fiber Optic Smart Patchcords



Fiber Optic Fault Finders



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# Product Innovation



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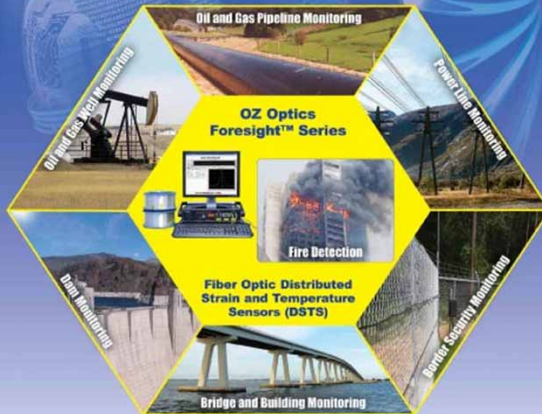


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## Fiber Optic Distributed Strain and Temperature Sensors

USA Patent Numbers: 7499151, 7599047

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 100 km sensing range
- Uses standard telecommunication fiber to minimize costs



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## Fiber Optic Fault Finder for Optical Network Safeguard™

- Monitors and reports network health status in real time, 24 hours/day, 365 days/year
- Lowers network operating and maintenance expenses
- Reduces revenue loss due to fiber plant outages
- User friendly interface via various wireless interfaces (Wi-Fi, GPRS), USB, or RS-232
- Reports fault location, giving GPS coordinates with time stamp
- Early alert and outage reports via cellular phone, email, IM, SMS, or text messaging



OZ Guard Automated Test Solution



Remote Monitoring a WDM Network



Remotely Accessible/Wireless Fault Finders



GPS Locator



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# Product Innovation



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## 2 micron Fiber Optic Components for PM and SM Fibers



Fiber Optic Patchcords



Fused Couplers / Taps /  
Beam Splitters / Combiners



Fiber Pigtailed  
Laser Diode Sources



Pigtail / Receptacle Style  
Collimators / Focusers



Polarizers



Manual / Electrically Controlled  
Variable Attenuators



Isolators

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## Fiber Optic Products for OCT Applications



OCT Modules



Manual / Electrically Controlled  
Broadband Variable Attenuators



Manual / Electrically Controlled  
Fiber Optic Delay Lines



Manual / Electrically Controlled  
Polarization Controllers



Fiber Pigtailed  
Broadband SLED Sources



Fiber Collimators / Focusers



Broadband Fused Couplers

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# Company Profile

Over 470 employees worldwide:

- 260 in Ottawa and US
- 50 in Turkey
- 160 in China

OZ Canada



OZ China



OZ Turkey

# Company Profile

## *OZ Optics is lead by an experienced team:*

- **Ömür Sezerman, Chairman, President & CEO**
  - Founder and CEO since inception (31 years)
- **Zahide Sezerman, VP of Human Resources**
  - With OZ Optics since inception (31 years)
- **Garland Best, VP of Components Division**
  - 24 years at OZ Optics
- **Gordon Youle, VP of Test Equipment Division**
  - 17 years at OZ Optics
- **Martin Powell, Operation Manager**
  - 12 years at OZ Optics
- **Sarah Miller, Controller**
  - 3 years at OZ Optics
- **Metin Sezerman, General Manager of OZ Turkey**
  - 15 years at OZ Optics
- **Bing Li, General Manager of OZ Optics China**
  - 12 years at OZ Optics

PRIVATE AND CONFIDENTIAL



# Company Profile

- ISO9001:2008 certified
- Broad patent portfolio
- Advanced proprietary processing technology



# Company Profile

- *Using our strong direct sales and distributors, we address the following markets:*



# Company Profile

➤ *OZ Optics has resellers and distributors in over 30 Countries & Regions and over 10,000 customers globally:*



Australia



France



Japan



Spain



Austria



Germany



Netherlands



Switzerland



Belgium



Greece



Luxembourg



Sweden



Brazil



Hong Kong



Norway



Taiwan



Canada



India



Poland



Thailand



China



Ireland



Portugal



Turkey



Czech Rep.



Israel



Singapore



United Kingdom



Denmark



Italy



South Korea



United States



# In-House Production Capabilities

- Experienced and well-trained staff in following fields:
  - optical, mechanical, electronics & software

CNC Machine Shop



AR Coating



Femtosecond Laser Lab



Clean Room



Laser Conditioning/Cleaving



PRIVATE AND CONFIDENTIAL

# Branch Network



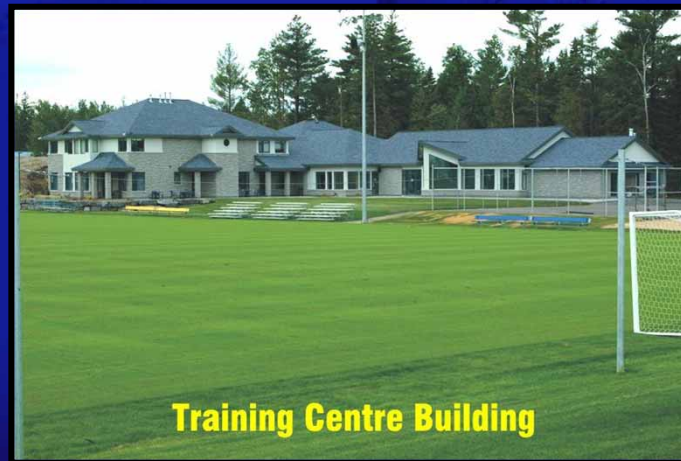
# Facility – Ottawa Headquarters

- 60,000 sq ft. – Manufacturing and R&D Facilities
- 15,000 sq ft. – Admin, Sales and Marketing
- 15,000 sq ft. – Training and Fitness Facility
- R&D, Product Design, Engineering, Final Assembly & QA





# Facility – Ottawa Headquarters



# OZ Optics – Turkey Factory

- Operational since 2000
- 33,000 sq ft. Manufacturing Facility
- Located in Free Trade Zone
- Low Tax Rates
- Sub Component Parts Manufacturing
- Cost Effective Manufacturing
- High Quality Labor





# OZ Optics China

- Operational since 2009
- Wholly Foreign Owned Enterprise
- Subcomponent Parts Manufacturing
- Cost Effective Manufacturing
- High Quality Labor
- Extensive Training  
( 3-6 months in OZ Canada)





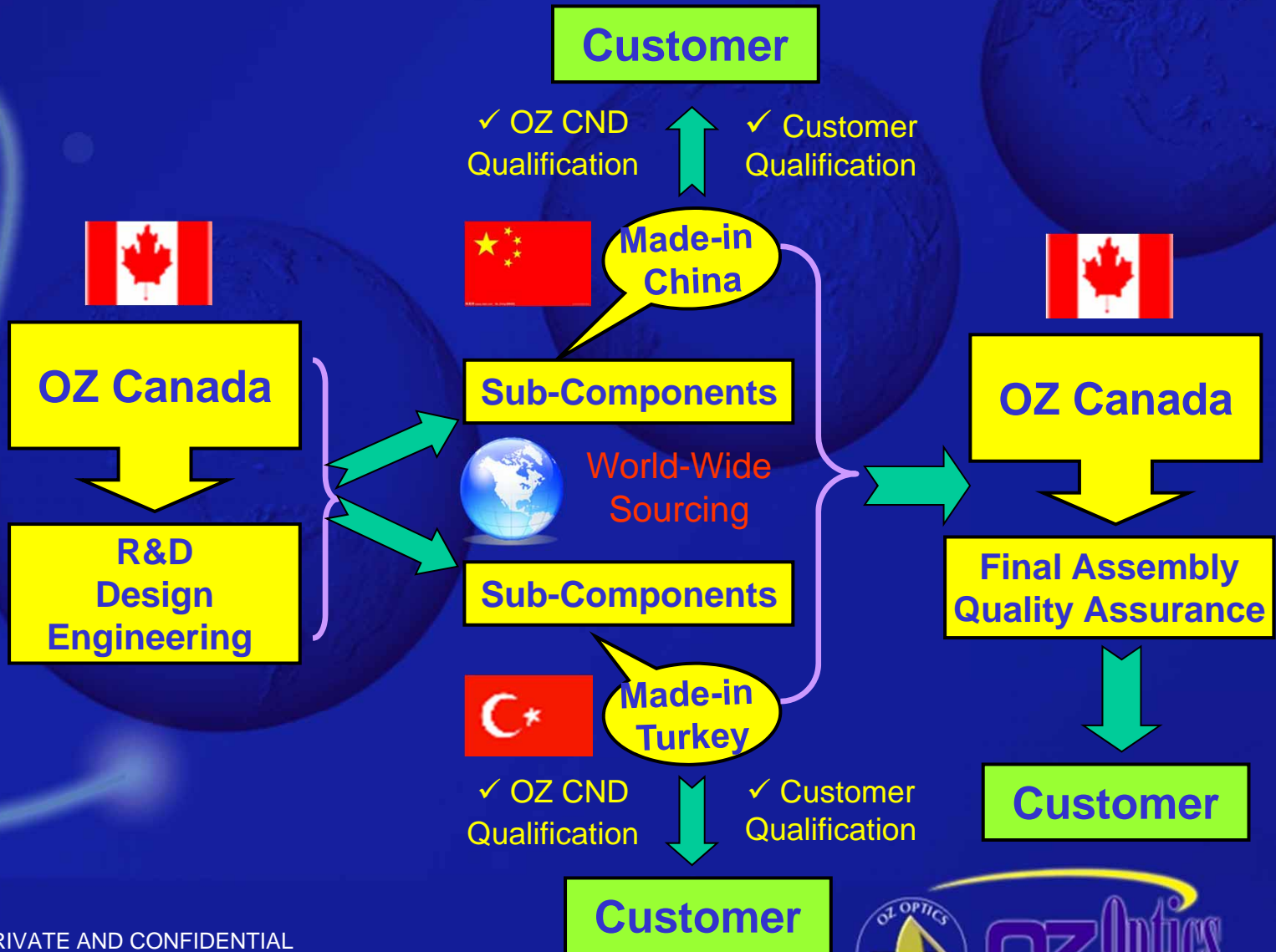
# OZ China Facility

## Jiaxing, China

- Located in Economic Development Zone
- 500 sq meters – Admin, Sales and Marketing
- 1500 sq meters – Manufacturing Area
  - 100 sq meters – Class 10,000 Clean Room
  - 100 sq meters – ESD Working Area



# Manufacturing Strategy



# Industry Standards

All products manufactured are in strict accordance with international industry standards:

➤ *Telecordia Compliance*



➤ *CE Compliance*



➤ *RoHS Compliance*



➤ *ISO 9001:2008 Certified (China, Turkey and Canada)*

➤ *Controlled Goods Directorate Registered*



# Core Competencies

- Pioneer in Polarization Maintaining (PM) Components
- Leader in Wavelength Flattened, High Power & Low PDL Components
- Leader in High Power Fiber Optic Delivery Systems
- Custom Test Equipment, Including Polarization Test Equipment and FTTH Equipment
- Widest Range in Attenuator Product Offering
- Fiber Optic Distributed Strain and Temperature Sensors
- Complete product line for OCT applications & 2 Micron

# Leading Technology

- **High Power Isolators**
  - power handling > 50W
  - low loss, low cost turnkey solution



High Power Free Space and Pigtailed Isolators

- **Pioneer in Polarization Maintaining (PM) Components**
  - wavelength flattened
  - high power & low PDL
  - PM test equipment



Polarization Maintaining Patchcords

Distributed Strain and Temperature Sensors



- **Fiber Optic Sensor**
  - fast and simultaneous measurement of strain & temp
  - large structure health monitoring

High Power Collimators/Focusers



- **Leader in High Power Fiber Optic Delivery Systems**
  - specializes in custom design



### OUR VISION

- Be the preferred Supplier of choice
- Capture and expand market share
- Maximize shareholder value

### OUR MISSION

- To become the leading provider of innovative optical products to telecom and non-telecom sectors

### OUR CORE VALUES

- Leadership
- Teamwork
- Boldness
- Commitment
- Innovation
- Rewards

### OUR QUALITY POLICY

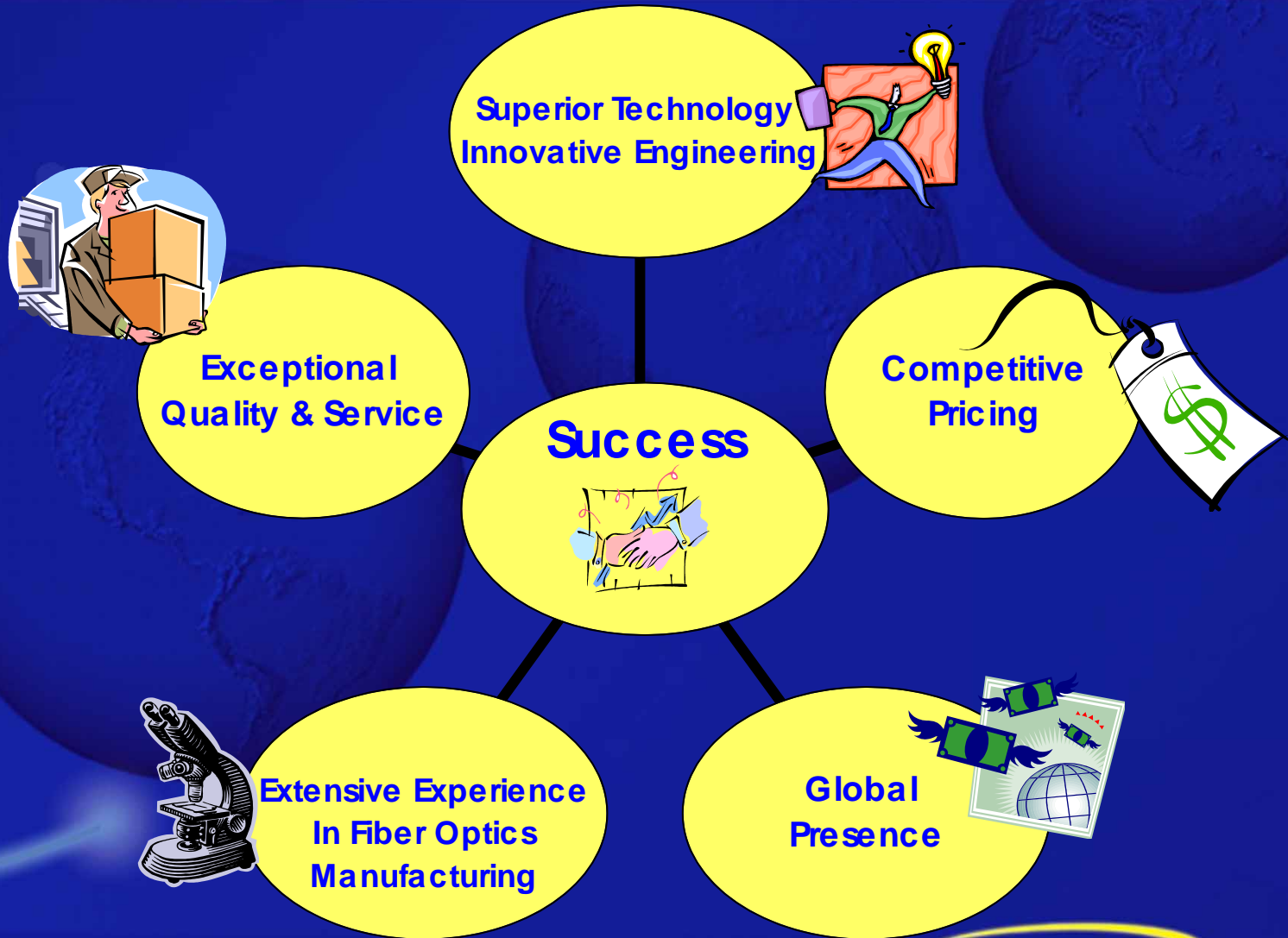
- Provide our Customers with a competitive advantage, leveraging performance, price and delivery, through a continuous process of Quality advancement in all areas of our Company
- Communicate effectively to our Customers, Suppliers and Shareholders our commitment to Quality and continuous improvement
- Promote opportunities of professional development for all members of our Company through education, training and personal challenge

Ömür Sezerman  
President





# Competitive Advantage



# OZ Optics

*Your solution provider for existing and next generation fiber optic components and test equipment*

*Please Contact Our Sales Dept:*

Tel: 613-831-0981 ext 3370

Toll Free: 1-800-361-5415

Email: [sales@ozoptics.com](mailto:sales@ozoptics.com).

# OZ Optics

*Thank You for Choosing OZ!*

